

METHOD AND APPARATUS FOR MONITORING  
MATERIALS USED IN ELECTRONICS

5 ABSTRACT

A method and apparatus suitable for monitoring the quality and/or performance of a processing aid or a component during manufacture, storage, or use of electronics or electronic assemblies is provided. The apparatus incorporates a  
10 sampling device, a multivariate sensing system (e.g., a multi-sensor array or at least one sensor capable of measuring multiple variables) capable to process an analysis of low vapor pressure or vaporizable constituents in electronics by detecting some changes in the physico-chemical properties of said sensor and/or electronics and applying multivariate analysis. In one embodiment, the sensing system comprises an  
15 array of metal oxide sensors and a multivariate analysis algorithm for data processing. This method and apparatus can be employed for various quality control purposes such as contamination analysis or failure analysis of integrated circuits components.